

The P2E-•V solenoid operator range

The P2E-•V range of operators are normally closed (NC) 3/2 solenoid valves, with exceedingly compact dimensions in relation to their capacity.

International standard

The port connection pattern complies with a new French CNOMO standard (in process of drafting), with cable plug connections in accordance with Form C/ISO15217.

Compact design

Overall dimensions of the P2E-•V operators are substantially less than those of earlier generations of solenoid operators.

High flow capacity

High flow capacity relative to the electrical operating power as a result of optimised internal flow paths.

Corrosion-resistant design

The valve is made of thermoplastic material and stainless steel, with Viton™ and nitrile rubber seals for excellent corrosion resistance.

Clean lines suitable for food industry applications, P2E-QV

The valve has been designed in conjunction with several machine manufacturers and organisations in the food processing industry, with corrosion-resistant materials and smooth lines being important starting points. The valve and its accessories have been designed so that there are no gaps or crevices in which dirt could collect.

High reliability

Few moving parts result in high reliability, rapid changeover and very long life.

Low power demand

The solenoids have a power demand of 1.2 W at 24 V DC and 1.6 VA at 24 V AC, 115 V AC and 230 V AC.

High protection class

The protection class is IP 67 when connected using the cable plug with a moulded cable. When using the standard cable plug for fitting by the user, the protection class is IP65, the bare valve, with Fast-on connectors, has an encapsulation class of IP 20.

Insensitive to dirty air

The use of generously sized flow paths (1.0 mm diameter) means that the valve can be used in normal industrial environments without problems of blocking.

Manual override as option

The operators can be supplied with or without manual override. The manual override device is available as a screwdriver groove or with a control arm, and is either spring return (blue) or lockable (yellow).

J

Order key, solenoid operators (15mm)

| | | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| P | 2 | E | - | Q | V | 3 | 2 | C | 3 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|

| Valve family | |
|--------------|-------------------|
| P2E | Solenoid operator |

| Subfamily | |
|--|-----------------------|
| Solenoid operator, 15 mm wide Electric connection acc. to ISO 15217 Form C EI/supply connection on opposite side | |
| K | Standard version |
| M | Mobile version |
| Q | Food industry version |

| Type of current | |
|-----------------|---------------------------|
| 1 | AC 50 Hz |
| 2 | DC |
| 4 | AC 50/60 Hz |
| 5 | Mobile and wide band only |

| Voltage | |
|----------|----------|
| B | 12 V |
| C | 24 V |
| D | 48 V |
| F | 115 V* |
| J | 230 V* |
| W | 37,5 V** |
| T | 72 V** |
| Y | 78 V** |
| V | 96 V** |
| E | 110 V** |

| Overriders | |
|------------|-----------------------------|
| 0 | Without |
| 1 | Non locking (blue) |
| 2 | Locking (yellow) |
| 3 | Extended non locking (blue) |
| 4 | Extended locking (yellow) |

| Valvetype/Function | |
|--------------------|-------------------------------------|
| 3 | 3/2 valve, normally closed (NC) |

* For standard and food type only
** For mobile "M" version only

Technical data

| | NC, Standard | NC, Food¹⁾ | NC, Mobile²⁾ |
|----------------------|---|------------------------------|--------------------------------|
| Working pressure | 0 to 10 bar | 0 to 10 bar | 0 to 10 bar |
| Working temperature | -15 °C to +60 °C | -15 °C to +60 °C | -40 °C to +70 °C |
| Orifice | 1,0 mm | 1,0 mm | 1,0 mm |
| Flow Qmax | 33 Nl/min | 33 Nl/min | 22 Nl/min |
| Power, hold | DC 1,2 W / AC 1,6 VA | DC 1,2 W / AC 1,6 VA | DC 1 W |
| Power, surge | DC 1,2 W / AC 3,5 VA | DC 1,2 W / AC 3,5 VA | DC 1 W |
| Connection time | 100% | 100% | 100% |
| Voltage tolerance | +10%/–15% | +10%/–15% | +25%/–30% |
| Electric connection: | Form C/ISO15217 | | |
| Port pattern: | To future CNOMO standard | | |
| Protection: | IP 65 - IP 67, depending on type of cable plug | | |
| Approval: | Some valves are UL-approved and marked with the following symbol ☉ | | |
| Working media: | All neutral media, such as compressed air, water, hydraulic oil and many gases. | | |
| 1) Design: | Completely smooth exterior, suitable for food industry. | | |
| 2) Mobile standard | According to European standard EN 50 155. | | |

Transients

Interrupting the current through the solenoid coil produces momentary voltage peaks which, under unfavourable conditions, can amount to several hundred times the rated operating voltage. Normally, these transients do not cause problems, but to achieve the maximum life of relays in the circuit (and particularly of transistors, thyristors and integrated circuits) it is desirable to provide protection by means of voltage-dependent resistors (varistors). All cable plugs with a yellow LED also incorporate such protection.

Service life

With compressed air at 6 bar, 20 °C and complying with the requirements for compressed air quality as set out in ISO8573-1 norm (class 4 for dry and class 5 for filtered air), the valves should have a life of at least 50 million cycles.

Materials

Operator

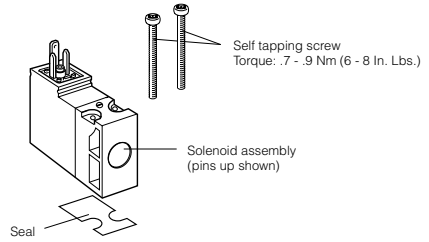
| | |
|----------------------|---------------------------------|
| Body, coil casing | Thermoplastic |
| Internal metal parts | Steel |
| Screws | Stainless steel |
| Bottom plug | Thermoplastic |
| Sealing materials | FPM (Viton™) and nitrile rubber |

Cable head

| | |
|-----------------|------------------------------------|
| Sheath | Thermoplastic |
| Retaining screw | Stainless steel, zinc-plated steel |

15mm Solenoid Operators

Electrical connection EN175301-803 C/ISO15217 (Ex DIN 43650C)



Solenoids 15 mm NC, standard

(Note! Mounting screws included in basic valve)

| | Voltage | Weight Kg | Order code Without manual override | Weight Kg | Order code Override, blue, non locking flush | Weight Kg | Order code Override, yellow, locking flush |
|-------------|-------------------------------|---------------------|---|---------------------|---|--------------|--|
| | 12 VDC | 0,038 | P2E-KV32B0 ④ | 0,038 | P2E-KV32B1 ④ | 0,038 | P2E-KV32B2 ④ |
| | 24 VDC | 0,038 | P2E-KV32C0 ④ | 0,038 | P2E-KV32C1 ④ | 0,038 | P2E-KV32C2 ④ |
| | 48 VDC | 0,038 | P2E-KV32D0 ④ | 0,038 | P2E-KV32D1 ④ | 0,038 | P2E-KV32D2 ④ |
| | 24 VAC 50Hz | 0,038 | P2E-KV31C0 ④ | 0,038 | P2E-KV31C1 ④ | 0,038 | P2E-KV31C2 ④ |
| | 48 VAC 50/60Hz | 0,038 | P2E-KV34D0 ④ | 0,038 | P2E-KV34D1 ④ | 0,038 | P2E-KV34D2 ④ |
| | 115 VAC 50Hz/ 120 VAC 60Hz | 0,038 | P2E-KV31F0 ④ | 0,038 | P2E-KV31F1 ④ | 0,038 | P2E-KV31F2 ④ |
| | 230 VAC 50Hz/ 240 VAC 60Hz | 0,038 | P2E-KV31J0 ④ | 0,038 | P2E-KV31J1 ④ | 0,038 | P2E-KV31J2 ④ |
| | | | | | | | |
| | Voltage | Weight Kg | Order code Override extended, blue, non locking flush | Weight Kg | Order code Override extended, yellow, locking flush | | |
| | 24 VDC | 0,038 | P2E-KV32C3 ④ | 0,038 | P2E-KV32C4 ④ | | |
| 24 VAC 50Hz | 0,038 | P2E-KV31C3 ④ | 0,038 | P2E-KV31C4 ④ | | | |

Solenoids 15 mm NC, mobile

(Note! Mounting screws included in basic valve)

| | Voltage | Weight Kg | Order code Without manual override | Weight Kg | Order code Override, blue, non locking flush |
|--|----------|--------------|--|--------------|--|
| | 12 VDC | 0,038 | P2E-MV35B0 | 0,038 | P2E-MV35B1 |
| | 24 VDC | 0,038 | P2E-MV35C0 | 0,038 | P2E-MV35C1 |
| | 37,5 VDC | 0,038 | P2E-MV35W0 | 0,038 | P2E-MV35W1 |
| | 48 VDC | 0,038 | P2E-MV35D0 | 0,038 | P2E-MV35D1 |
| | 72 VDC | 0,038 | P2E-MV35T0 | 0,038 | P2E-MV35T1 |
| | 78 VDC | 0,038 | P2E-MV35Y0 | 0,038 | P2E-MV35Y1 |
| | 96 VDC | 0,038 | P2E-MV35V0 | 0,038 | P2E-MV35V1 |
| | 110 VDC | 0,038 | P2E-MV35E0 | 0,038 | P2E-MV35E1 |

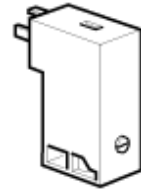
Solenoids 15 mm NC, food industry version

(Note! Mounting screws included in basic valve)

| | Voltage | Weight Kg | Order code Without manual override | Weight Kg | Order code Override, blue, non locking flush | Weight Kg | Order code Override, yellow, locking flush |
|---------------|-------------------------------|---------------------|---|---------------------|---|--------------|--|
| | 24 VDC | 0,038 | P2E-QV32C0 ④ | 0,038 | P2E-QV32C1 ④ | 0,038 | P2E-QV32C2 ④ |
| | 48 VDC | 0,038 | P2E-QV32D0 ④ | 0,038 | P2E-QV32D1 ④ | 0,038 | P2E-QV32D2 ④ |
| | 24 VAC 50Hz | 0,038 | P2E-QV31C0 ④ | 0,038 | P2E-QV31C1 ④ | 0,038 | P2E-QV31C2 ④ |
| | 48 VAC 50/60Hz | 0,038 | P2E-QV34D0 ④ | 0,038 | P2E-QV34D1 ④ | 0,038 | P2E-QV34D2 ④ |
| | 115 V 50Hz/ 120 V 60Hz | 0,038 | P2E-QV31F0 ④ | 0,038 | P2E-QV31F1 ④ | 0,038 | P2E-QV31F2 ④ |
| | 230 VAC 50Hz/ 240 VAC 60Hz | 0,038 | P2E-QV31J0 ④ | 0,038 | P2E-QV31J1 ④ | 0,038 | P2E-QV31J2 ④ |
| | | | | | | | |
| | | | | | | | |
| | Voltage | Weight Kg | Order code Override extended, blue, non locking flush | Weight Kg | Order code Override extended, yellow, locking flush | | |
| | 24 VDC | 0,038 | P2E-QV32C3 ④ | 0,038 | P2E-QV32C4 ④ | | |
| | 24 VAC 50Hz | 0,038 | P2E-QV31C3 ④ | 0,038 | P2E-QV31C4 ④ | | |
| | 115 VAC 50 Hz | 0,038 | P2E-QV31F3 ④ | 0,038 | P2E-QV31F4 ④ | | |
| 230 VAC 50 Hz | 0,038 | P2E-QV31J3 ④ | 0,038 | P2E-QV31J4 ④ | | | |

In accordance with the EU Machine Directive, EN 983, solenoid valves with manual override should have spring-return operating arms for safety.

- High performance and flow
- 8 mm Pin spacing
- UL Listed (according types)
- IP 65 Encapsulated coil (connected)
- Full compliance with European Directives 73/23/EEC "Low Voltage"
89/336/EEC "Electro-Magnetic Compability"



Operating information

| | NC, Standard flow | NO, Standard flow | NC, High flow |
|---------------------|--------------------------|--------------------------|----------------------|
| Working pressure | 0 to 10 bar | 0 to 10 bar | 0 to 10 bar |
| Working temperature | -15 °C to +60 °C | -15 °C to +50 °C | -15 °C to +50 °C |
| Orifice diameter | 1,0 mm | 1,1 mm | 1,4 mm |
| Flow Qmax | 33 NI/min | 33 NI/min | 50 NI/min |
| Power, Hold | DC1,2 W / AC1,6 VA | DC1,8 W / AC 2,4 VA | DC1,8 W / AC 2,4 VA |
| Power, Inrush | 1,2 W / AC 3,5 VA | 1,8 W / AC 5,5 VA | 1,8 W / AC 5,5 VA |
| Voltage range | + 10 %, -15 % | + 10 %, -15 % | + 10 %, -15 % |

Note! Solenoids are supplied without screws.

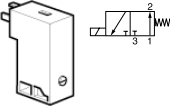
Solenoid 15 mm NC Standard flow

(electrical interface same side as pneumatic interface)

| | Voltage | Weight kg | Order code | | Weight kg | Order code | |
|---------------------|----------------|--------------|-------------------------|---|---------------------|---|----------------------|
| | | | Without manual override | With manual override | | Non locking flush | With manual override |
| <p>120 VAC 60Hz</p> | 12 VDC | 0,038 | P2E-KS32B0 | 0,038 | P2E-KS32B1 | 0,038 | P2E-KS32B2 |
| | 24 VDC | 0,038 | P2E-KS32C0 | 0,038 | P2E-KS32C1 | 0,038 | P2E-KS32C2 |
| | 48 VDC | 0,038 | P2E-KS32D0 | 0,038 | P2E-KS32D1 | 0,038 | P2E-KS32D2 |
| | 24 VAC 50Hz | 0,038 | P2E-KS31C0 | 0,038 | P2E-KS31C1 | 0,038 | P2E-KS31C2 |
| | 48 VAC 50/60Hz | 0,038 | P2E-KS34D0 | 0,038 | P2E-KS34D1 | 0,038 | P2E-KS34D2 |
| | 115 VAC 50Hz/ | 0,038 | P2E-KS31F0 | 0,038 | P2E-KS31F1 | 0,038 | P2E-KS31F2 |
| | | | | | | | |
| | Voltage | | Weight kg | Order code With manual override | Weight kg | Order code With manual override | |
| | | | | Extended non locking | | Extended locking | |
| | 24 VDC | | 0,038 | P2E-KS32C3 | 0,038 | P2E-KS32C4 | |
| | 24 VAC 50Hz | | 0,038 | P2E-KS31C3 | 0,038 | P2E-KS31C4 | |

Solenoid 15 mm NO Standard flow

(electrical interface same side as pneumatic interface)

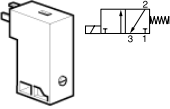


| Voltage | Weight kg | Order code Without manual override | Weight kg | Order code Override Non locking flush | Weight kg | Order code Override Locking flush |
|-------------|--------------|--|--------------|---|--------------|---|
| 24 VDC | 0,038 | P2E-KS12C0 | 0,038 | P2E-KS12C1 | 0,038 | P2E-KS12C2 |
| 24 VAC 50Hz | 0,038 | P2E-KS11C0 | 0,038 | P2E-KS11C1 | 0,038 | P2E-KS11C2 |

| Voltage | Weight kg | Order code Override extended non locking | Weight kg | Order code Override extended locking |
|-------------|--------------|--|--------------|--|
| 24 VDC | 0,038 | P2E-KS12C3 | 0,038 | P2E-KS12C4 |
| 24 VAC 50Hz | 0,038 | P2E-KS11C3 | 0,038 | P2E-KS11C4 |

Solenoid 15 mm NC High flow

(electrical interface same side as pneumatic interface)



| Voltage | Weight kg | Order code Without manual override | Weight kg | Order code Override flush Non locking | Weight kg | Order code Override flush Locking |
|----------------------------|--------------|--|--------------|---|--------------|---|
| 24 VDC | 0,038 | P2E-HS32C0 | 0,038 | P2E-HS32C1 | 0,038 | P2E-HS32C2 |
| 24 VAC 50Hz | 0,038 | P2E-HS31C0 | 0,038 | P2E-HS31C1 | 0,038 | P2E-HS31C2 |
| 48 VDC | 0,038 | P2E-HS32D0 | 0,038 | P2E-HS32D1 | 0,038 | P2E-HS32D2 |
| 115 V 50Hz / 120 V 60Hz | 0,038 | P2E-HS31F0 | 0,038 | P2E-HS31F1 | 0,038 | P2E-HS31F2 |

| Voltage | Weight kg | Order code Override extended non locking | Weight kg | Order code Override extended locking |
|----------------------------|--------------|--|--------------|--|
| 24 VDC | 0,038 | P2E-HS32C3 | 0,038 | P2E-HS32C4 |
| 24 VAC 50Hz | 0,038 | P2E-HS31C3 | 0,038 | P2E-HS31C4 |
| 48 VDC | 0,038 | P2E-HS32D3 | 0,038 | P2E-HS32D4 |
| 115 V 50Hz / 120 V 60Hz | 0,038 | P2E-HS31F3 | 0,038 | P2E-HS31F4 |

Main data for spare set of Solenoids Mounting screws

| Kit | Type | Material | Ø mm | Length mm | Weight kg | Order code |
|-----|--------------|-------------------|--------|--------------|--------------|-----------------------|
| | Metric | Steel, passivated | M3 | 26 | 0,02 | P2E-KP026PM3 * |
| | Self tapping | Steel, passivated | Ø 3 mm | 25 | 0,02 | P2E-KP025PS3 * |

*Sold by lot of 10

Correspondence table between screws and Valves Series

| Valvetronic Series | Description | Mounting screw length | Order code Mounting screw kit |
|--------------------|---------------------|-----------------------|-------------------------------|
| P2S-HW | Valvetronic Solstar | 25 mm | P2E-KP025PS3 |
| P2S-EW | Interface 2000 | 26 mm | P2E-KP026PM3 |
| PVL-B10 | Valvetronic 1/8" | 26mm | P2E-KP026PM3 |
| PVL-C10 | Valvetronic 1/4" | 26 mm | P2E-KP026PM3 |